

Abstract of the Disclosure

Disclosed is a method for detecting a fault by using harmonics and a state transition diagram. When the fault occurs on transmission lines, the fault is detected by using harmonics and the state transition diagram. Two logic signals are outputted by using apparent impedance of a steady state characteristic and a sum of harmonics components of a transient state characteristic. Such two logic signals are used as input parameters of the state transition diagram so that the state of an electric power system is presumed based on a state transition of the electric power system. It is possible to prevent a distance relay from being malfunctioned under an increase of load and unstable voltage. The state of the electric power system is presumed by using harmonics and the state transition diagram, and the fault on the transmission line is reliably detected.